

### AMENDMENTS TO THE CLAIMS

1. **(Currently amended)** A ~~vaccine~~ composition for administration to an animal, comprising:

an isolated immunogenic ~~component~~ heatshock protein of *L. intracellularis* ~~or a related microorganism~~ having an amino acid sequence comprising SEQ ID NO:2 in an amount effective to induce a protective immune response against *L. intracellularis*; wherein said related microorganism is an isolate or sub-type of *L. intracellularis* or other species of the genus *Lawsonia*; and

a pharmaceutically acceptable carrier.

2. **(Currently amended)** The ~~vaccine~~ composition according to Claim 1, wherein the ~~animal~~ composition is formulated for administration to a pig.

3.-11. **(Canceled)**

12. **(Currently amended)** The ~~vaccine~~ composition of Claim 10, wherein the polypeptide heatshock protein is produced by expression of ~~encoded by~~ a nucleic acid having a sequence comprising SEQ ID NO:1.

13.-31. **(Canceled)**

32. **(Currently amended)** A method for ~~vaccinating~~ inducing an immune response in an animal against ~~infection by *L. intracellularis* or a related microorganism~~ or treating an animal infected by *L. intracellularis*, said method comprising the step of:

administering to said animal an effective amount of ~~an isolated immunogenic component of *L. intracellularis* or a related microorganism, wherein said related microorganism is an isolate or sub-type of *L. intracellularis* or other species of the genus *Lawsonia* for a time and under conditions sufficient to induce a protective immune response against *L. intracellularis* or said related microorganism~~ the composition of Claim 1 to induce an immune response to *L. intracellularis*.

33. **(Withdrawn)** The method according to Claim 32 wherein the animal is a pig.

34.-36. **(Canceled)**

37. **(Currently Amended)** The method according to Claim 32, wherein said isolated immunogenic component composition further comprises at least one of a second peptide; or protein, carbohydrate, lipid or nucleic acid molecule or a combination thereof from *L.*

~~intracellularis or the related microorganism in an amount effective to induce a protective immune response against *L. intracellularis* or said related microorganism.~~

38. (Canceled)

39. (Currently Amended) The method according to Claim ~~38~~37, wherein the second peptide or protein is in recombinant form.

40. (Currently amended) The method according to Claim ~~32~~37, wherein the ~~isolated immunogenic component is~~ second protein is selected from the group consisting of: a ~~protein, wherein said protein is a refolding protein, a~~ second heatshock protein, ~~or the combination thereof, a flagellar basal body rod protein, an S-adenosylmethionine, tRNA ribosyltransferase-isomerase, an autolysin, an enoyl-(acyl-carrier-protein) reductase, and a glucarate transporter.~~

41.-113. (Canceled)

114. (Currently amended) The ~~vaccine~~ composition of Claim 1, wherein said ~~isolated immunogenic component~~ composition further comprises a at least one other polypeptide selected from the group consisting of: SEQ ID NOS: 2, 4, 7, 9, 10, 12, 14, and 16.

115. (Currently amended) The ~~vaccine~~ composition of Claim ~~81~~, ~~wherein said peptide or~~ further comprising at least one other protein, which is encoded by the nucleotide sequence selected from the group consisting of: SEQ ID NOS: 3, 5, 6, 8, 11, 13, 15, 17, 18, 19, 20, 21, 22, and 23.

116. (New) The composition of Claim 1, further comprising at least one other protein from *L. intracellularis*, said protein selected from the group consisting of: a refolding protein, a flagellar basal body rod protein, a second heatshock protein, an S-adenosylmethionine, a tRNA transferase-isomerase, an autolysin, an enoyl-(acyl-carrier-protein) reductase, and a glucarate transporter.